CONTENTS OF VOLUME 57

Number 1

Sun-compass orientation in the meadow vole, *Microtus pennsylvanicus* ..... *Sunny L. Fluharty, Douglas H. Taylor,* and *Gary W. Barrett* 1

Chromosomal variation in the plains woodrat: male meiosis and breeding studies ..... *Jerry W. Warner* 10

Roosting ecology of the pallid bat, *Antrozous pallidus* ..... *Terry A. Vaughan* and *Thomas J. O'Shea* 19

Levels of aggression in fluctuating populations of the prairie vole, *Microtus ochrogaster*, in eastern Kansas ..... *Robert K. Rose* and *Michael S. Gaines* 43

Right whale feeding and baleen rattle ..... *William A. Watkins* and *William E. Schevill* 58

Environments of kangaroo rats (*Dipodomys*) and effects of environmental change on populations in southern Nevada ..... *Janice C. Beatley* 67

Agonistic signals and hierarchy changes of antelope squirrels ..... *George F. Fisler* 94

An assessment of relationships and effects of interbreeding among woodrats of the *Neotoma floridana* species-group ..... *Elmer C. Birney* 103

Hay territory and dominance rank of pikas (*Ochotona princeps*) ..... *Takeo Kawamichi* 133

Field determination of energy flow in a small nocturnal mammal ..... *V. Ross Collins* and *Michael H. Smith* 149

General Notes

Systematic relationships of the four-toed populations of *Dipodomys heermanni* ..... *James L. Patton, Heather MacArthur,* and *Suh Y. Yang* 159

Sex chromosomes and Giemsa banding pattern of *Plecotus townsendii* ..... *Mark C. Anthony* and *Robert M. Kitchin* 163

The South American sea lion, *Otaria byronia*, in the Galapagos Islands ..... *G. M. Wellington* and *Tj. de Vries* 166

Problems with estimating herbivore diets by microscopically identifying plant fragments from stomachs ..... *Mark Westoby, Gregory R. Rost,* and *James A. Weis* 167

A chemiluminescent tag for tracking bats and other small nocturnal animals ..... *Edward R. Buchler* 173

New record of *Antilocapra americana* Ord, 1818, in the late Pleistocene fauna of the Los Angeles Basin ..... *Richard L. Reynolds* 176

Audibility aspects of sonic tracking of marine mammals ..... *J. M. Terhune* 179

Establishment of the black-tailed jackrabbit on the Virginia eastern shore ..... *Roger B. Clapp, John S. Weske,* and *Tina C. Clapp* 180

Improved technique for marking bats ..... *Frank J. Bonaccorso, Nicholas Smythe,* and *Stephen R. Humphrey* 181

Pre-hibernation behavior of free-living hoary marmots, *Marmota caligata* ..... *David P. Barash* 182

Behavioral reactions of two female harbor seals (*Phoca vitulina concolor*) to their dead offspring ..... *Michelle Trudeau* 185

Weights of Rocky Mountain elk ..... *R. E. Dean, E. T. Thorne,* and *I. J. Yorgason* 186

Ectoparasites from bats in extreme west Texas and south-central New Mexico ..... *T. J. Dooley, J. R. Bristol,* and *A. G. Canaris* 189

A series of strandings by a single herd of pilot whales on the west coast of Florida ..... *William K. Fehring* and *Randall S. Wells* 191

Systematic position of the alleged primate *Lantianius xichuensis* Chow, 1964, from the Eocene of China ..... *Philip D. Gingerich* 194

Food habits of cave bats from Zambia, Africa ..... *John O. Whitaker, Jr.,* and *Hal Black* 199

Silver-haired bat in Mexico ..... *Terry L. Yates, David J. Schmidly,* and *Kaye L. Culbertson* 205

Obituary

Richard Hyde Manville, 1910–1974 ..... *William H. Burt* 206

Reviews

The mammals of Louisiana and its adjacent waters, by G. H. Lowery, Jr. ..... *J. Knox Jones, Jr.* 210

The vampire bat, by D. C. Turner ..... *Frank J. Bonaccorso* 211

Mammals of New Mexico, by J. S. Findley, A. H. Harris, D. E. Wilson, and C. Jones ..... *David M. Armstrong* 212

Comments and News 214

NUMBER 2

Nocturnal behavior of the African false vampire bat (*Cardioderma cor*) ..... *Terry A. Vaughan* 227

Reproduction in *Didelphis marsupialis* and *D. albiventris* in Colombia ..... *C. H. Tyndale-Biscoe* and *R. B. Mackenzie* 249

Survival of laboratory-reared pocket mice, *Perognathus longimembris* ..... *P. Hayden* and *R. G. Lindberg* 266

Mucosal surface areas and villous morphology of the small intestine of small mammals: functional interpretations ..... *Ronald E. Barry, Jr.* 273

Daily activity and body temperature of the southern woodchuck, *Marmota monax monax*, in northwestern Arkansas ..... *Steven R. Hayes* 291

Food relationships of a rodent fauna in a California coastal sage scrub community ..... *Peter L. Meserve* 300

Influence of stimuli from populations of *Peromyscus leucopus* on maturation of young ..... *John G. Rogers, Jr.*, and *Gary K. Beauchamp* 320

Behavioral character displacement: evidence of food partitioning in insectivorous bats ..... *Sandra L. Husar* 331

Relationships among South American phyllotine rodents based on chromosome analysis ..... *Oliver P. Pearson* and *James L. Patton* 339

Temporal fluctuations in density and diversity of desert rodent populations ..... *Walter G. Whitford* 351

General Notes

Deciduous premolars in *Thryonomys* ..... *Charles A. Woods* 370

Precopulatory and copulatory behavior in coyotes ..... *Marc Bekoff* and *Judy Diamond* 372

Phenetic relationships of pocket mice in the subgenus *Chaetodipus* (Rodentia: Heteromyidae) ..... *William Caire* 375

Weight of adrenal glands in the bobcat (*Lynx rufus*) ..... *T. D. McKinney* and *M. R. Dunbar* 378

Observations on the feeding habits of phyllostomatid bats (*Carollia, Anoura*, and *Vampyrops*) in southeastern Brazil ..... *Ivan Sazima* 381

Bacula of *Dipodomys ordii compactus* and *Dipodomys elator* ..... *Frederick J. Jannett, Jr.* 382

Mortality of Dall's sheep within a cave ..... *George W. Scotter* and *Norman M. Simmons* 387

Feeding behavior of the slender mongoose ..... *Terry A. Vaughan* 390

Coat color adaptations of rodents occurring on lava beds—reanalysis of an exceptional case ..... *Timothy E. Lawlor* 391

Vocalizations of the long-tailed weasel (*Mustela frenata*) ..... *Gerald E. Svendsen* 398

Observations of the behavior of jackrabbits (*Lepus californicus*) in the Mojave Desert ..... *W. R. Costa, K. A. Nagy*, and *V. H. Shoemaker* 399

Voice and habitat of *Dactylomys dactylinus* (Rodentia: Echimyidae) in Ecuador ..... *Richard K. LaVal* 402

Odor as a possible isolating mechanism in sympatric species of shrews (*Sorex vagrans* and *Sorex obscurus*) ..... *Myrnal L. Hawes* 404

Reproductive activity in nine- and ten-month-old wolves ..... *Dennis C. Mech* and *L. David Mech* 406

Sand bathing in kangaroo rats (*Dipodomys spectabilis*) ..... *Harriet Laine* and *Joseph G. Griswold* 408

A unique method of prey capture by a sea otter, *Enhydra lutris* ..... *Kim McCleneghan* and *Jack A. Ames* 410

Relationships between nest building and general activity in the oldfield mouse, *Peromyscus polionotus* ..... *Charles T. Garten, Jr.* 412

A probable sighting of a live *Tasmacetus shepherdi* in New Zealand waters ..... *W. A. Watkins* 415

Obituaries

Vladimir G. Heptner (1901–1975) ..... *Olga L. Rossolimo* and *Robert S. Hoffmann* 416

Helmut K. Buechner (1918–1975) ..... *John F. Eisenberg* and *Devra G. Kleiman* 417

Reviews

The mammals of Canada, by A. W. F. Banfield ..... *R. L. Peterson* 419

Mammals of the World, by E. P. Walker *et al.* ..... *James S. Findley* 420

The whale problem, edited by W. Schevill ..... *T. D. Smith* and *W. F. Perrin* 421

Comments and News 428

NUMBER 3

Paleoecological significance of the short-tailed shrew (*Blarina*), with a systematic discussion of *Blarina ozarkensis* — *Russell W. Graham* and *Holmes A. Semken* 433

Home range, social behavior, and dominance relationships in the African unstriped ground squirrel, *Xerus rutilus* — *Thomas J. O'Shea* 450

Lemmus lemmus: a possible case of aposematic coloration and behavior — *Malte Andersson* 461

Ecology of a Pleistocene relict, the western big-eared bat (*Plecotus townsendii*), in the southern Great Plains — *Stephen R. Humphrey* and *Thomas H. Kunz* 470

Notes on the activity, reproduction, and social behavior of *Octodon degus* — *George W. Fulk* 495

Biochemical variation and systematics of *Peromyscus pectoralis* — *C. William Kilpatrick* and *E. G. Zimmerman* 506

Snowshoe hare population response to artificial high densities — *Lamar A. Windberg* and *Lloyd B. Keith* 523

Overwintering of the red-backed vole at Edmonton, Alberta, Canada — *L. L. Stebbins* 554

A new species of pocket mouse (*Perognathus*: Heteromyidae) from the Cape Region of Baja California Sur, Mexico — *Edward L. Roth* 562

General Notes

Effects of temperature, photoperiod, and thiourea on the thyroid of the woodrat (*Neotoma micropus*) — *John R. Capeheart* and *John M. Burns* 567

Gestation period in the wolverine, *Gulo gulo* — *Clifford F. Mehrer* 570

Copulatory behavior of *Neotoma lepida* and *Baiomys taylori*: relationships between penile morphology and behavior — *Daniel Q. Estep* and *Donald A. Dewsbury* 570

Age composition of vampire bats (*Desmodus rotundus*) in northern Argentina and southern Brazil — *Rexford D. Lord, Farouk Muradali,* and *Luis Lazaro* 573

Space utilization by rodents in *Adenostoma* chaparral — *David F. Bradford* 576

A survey of dugongs (*Dugong dugon*) in Queensland — *Sandra Husar Ligon* 580

Scent marking by yellow-bellied marmots — *Kenneth B. Armitage* 583

Surplus-killing of reindeer by wolves — *Anders Bjärvall* and *Edvin Nilsson* 585

White-throated woodrat (*Neotoma albigula*) habitat relations in modified pinyon-juniper woodland of southwestern New Mexico — *Frank J. Turkowski* and *Ross K. Watkins* 586

Solenodon paradoxus in southern Haiti — *Charles A. Woods* 591

Reproduction during two annual cycles in a population of *Peromyscus leucopus noveboracensis* — *David L. Rintamaa, Paul A. Mazur,* and *Stephen H. Vessey* 593

Notes on numbers and distribution of fur seals, *Arctocephalus tropicalis* (Gray), on Marion and Prince Edward islands, Southern Ocean — *A. F. DeVilliers* and *G. J. B. Ross* 595

Tail autotomy as an escape mechanism in *Rattus rattus* — *Gail R. Michener* 600

Notes on the bats *Saccopteryx canescens* Thomas and *Micronycteris hirsuta* (Peters) — *William B. Davis* 604

Conspecific odors and trappability of deer mice (*Peromyscus leucopus noveboracensis*) — *Edward Mazdzer, Michael R. Capone,* and *Lee C. Drickamer* 607

Density and movements of the coati in Arizona — *Dirk V. Lanning* 609

Reviews

International Zoo Yearbook, vols. 14–15, edited by N. Duplaix-Hall — *Robert L. Brownell, Jr.,* and *Katherine Ralls* 612

Prosimian Biology, by R. D. Martin, G. A. Doyle, and A. C. Walker, and Lemur Biology, by I. Tattersall and R. W. Sussman — *Devra G. Kleiman* 613

The cheetah. The biology, ecology, and behavior of an endangered species, by R. L. Eaton — *Ronald M. Nowak* and *John L. Paradiso* 614

Comments and News — 616

NUMBER 4

Current status and distribution of the coati in the United States ..... *John H. Kaufmann, Dirk V. Lanning,* and *Sarah E. Poole* 621

Reproduction, growth, and development in the Yucatan deer mouse, *Peromyscus yucatanicus* ..... *James Alden Lackey* 638

Social effects of roosting on the metabolism of the pallid bat (*Antrozous pallidus*) ..... *Dennis R. Trune* and *C. N. Slobodchikoff* 656

A new species of small cat from the Late Quaternary of southeastern United States ..... *David D. Gillette* 684

Free-watering a wild population of house-mice—a test of an Australian hypothesis in California ..... *A. E. Newsome, R. C. Stendell,* and *J. H. Myers* 677

Geographic variation in the lesser noctilio, *Noctilio albiventris* (Chiroptera) ..... *William B. Davis* 687

A field study of growth and development of nestling masked shrews (*Sorex cinereus*) ..... *Douglas J. Forsyth* 708

Preliminary observations of the taruca (*Hippocamelus antisensis*: Cervidae) in southern Peru ..... *Nicholas A. Roe* and *William E. Rees* 722

Environmental effects on food hoarding in deermice (*Peromyscus*) ..... *William J. Barry* 731

General Notes

Activity of bats in a small village clearing near Iquitos, Perú ..... *William B. Davis* and *James R. Dixon* 747

Stomach content weight and food selection by Richardson ground squirrels ..... *Richard M. Hansen* and *Mark K. Johnson* 749

Notes on the deciduous dentition of the Borhyaenidae (Marsupialia: Borhyaenoidea) ..... *Larry G. Marshall* 751

Body temperature and oxygen consumption of the pentail tree shrew (*Ptilocercus lowii*) ..... *G. C. Whittow* and *E. Gould* 754

A second Brazilian record of the South American flat-headed bat, *Neoplatymops mattogrossensis* ..... *Ivan Sazima* and *Valdir A. Taddei* 757

Density-dependent dispersal in *Sigmodon*: a critique ..... *Leroy R. McClenaghan, Jr.,* and *Michael S. Gaines* 758

Predation by the tayra (*Eira barbara*) ..... *Bennett G. Galef, Jr., Russell A. Mittermeier,* and *Robert C. Bailey* 760

Fecundity of wild sheep (*Ovis orientalis*) in Iran ..... *Raul Valdez* 762

Hypotheses linking food habits and habitat selection in *Peromyscus* ..... *Lee C. Drickamer* 763

Infant coloration and taxonomic affinity of the Mentawai Islands leaf monkey, *Presbytis potenziani* ..... *Ronald L. Tilson* 766

Structure of the penis in the fruit bat *Rousettus aegyptiacus* (Megachiroptera) ..... *Gamal Madkour* 769

Runway use and population density in *Microtus ochrogaster* ..... *Diane Carroll* and *Lowell L. Getz* 772

Notes on dispersal of male white-tailed deer ..... *K. E. Kammermeyer* and *R. L. Marchinton* 776

Canine tooth wear in captive big brown bats (*Eptesicus fuscus*) ..... *Donald R. Clark, Jr.* 778

Field observations of male fighting, drumming, and copulation in the Great Basin kangaroo rat, *Dipodomys microps* ..... *G. J. Kenagy* 781

Monodelphis umbristriata (A. de Miranda-Ribeiro) is a distinct species of opossum ..... *Ronald H. Pine* 785

Labrador grizzly (*Ursus arctos* L.): first skeletal evidence ..... *Arthur Spiess* 787

Analysis of social structure from multiple capture data ..... *Norman A. Slade* 790

Reviews

The rodents of Uganda, by M. J. Delany ..... *Henry W. Setzer* 796

The wilderness home of the giant panda, by W. G. Sheldon ..... *James D. Lazell, Jr.* 796

Morphology of the Sirenia; a macroscopic and X-ray atlas of the osteology of Recent species, by H. E. Kaiser ..... *Michael Kesner* and *Cynthia Lance* 798

Fifty-sixth Annual Meeting 799

Comments and News 804

Index 811